Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range and Amendment of the Commission's Rules to Authorize Subsidiary Terrestrial Use of the 12.2-12.7 GHz Band by Direct Broadcast Satellite Licensees and Their Affiliates	ET Docket No. 98-206 RM-9147 RM-9245

COMMENTS OF SBC COMMUNICATIONS, INC.

I. INTRODUCTION.

SBC Communications, Inc.[1] hereby comments on the Notice of Proposed Rulemaking ("NPRM") in the above-captioned proceeding. The NPRM proposes to permit non-geostationary satellite orbit ("NGSO") fixed-satellite service ("FSS") operations in certain segments of the Ku-band, including the 10.7-11.7 GHz band, and also proposes rules

[1] SBC Communications Inc. ("SBC") is the parent/holding company of various subsidiaries conducting business under federal licenses. These subsidiaries include Southwestern Bell Telephone Company ("SWBT"), Pacific Bell, Nevada Bell, Southern New England Telephone Company and various wireless carriers including Southwestern Bell Mobile Systems, Inc. ("SBMS"), Southwestern Bell Wireless Inc. ("SWBW") and Pacific Bell Mobile Services ("PBMS"). The abbreviation "SBC" shall be used herein to include each of these subsidiaries as appropriate in the context.

and policies to govern such operations.[2] Some of SBC's affiliates operate fixed point-to-point microwave links in the 10.7-11.7 segment. SBC's primary interest is in making sure that fixed services are not further squeezed into smaller and smaller segments of the radio spectrum. This is of particular concern because the 10.7-11.7 MHz segment has been identified as the future home for fixed point-to-point operations to be relocated from the 2 GHz band. Any allowance for NGSO FSS must not compromise the use of the band by fixed services.

II. WITHOUT A DEFINITIVE INTERFERENCE STANDARD RELATING TO ALLOWABLE INTERFERENCE, IT IS DIFFICULT TO TRULY EVALUATE WHETHER SHARING IS POSSIBLE.

Skybridge proposes to use the 10.7-11.7 GHz band for gateway downlinks.[3] The Commission acknowledges that this part of the band is very important to fixed services and that the impact of the downlink operations on the incumbent operations must be carefully considered.[4] However, the Commission believes that sharing is possible if the gateway stations are not extensively deployed and proper coordination is performed.[5] The Commission's belief is based on a series of assumptions that are unproven.

The Commission proposes using the NGSO pfd limits adopted at WRC-97 because they have generally proven reliable for sharing between GSO FSS and fixed

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[2] In the Matter of Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range and Amendment of the Commission to authorize Subsidiary Terrestrial use of the 12.2-12.7 GHz Band by Direct Broadcast Satellite Licensees and Their Affiliates, ET Docket No. 98-206, RM-9147, RM-925. Notice of Proposed Rulemaking released November 24, 1998 ("NPRM").

[3] Id at para. 16.

[4] Id.

[5] Id. at para. 17.

services.[6] But the Commission further notes that there are important differences between GSO FSS and NGSO FSS systems and asks for comment on whether the pfd limits being proposed for long term interference protection are adequate to protect terrestrial fixed operations against interference from NGSO FSS operations.[7] Moreover, the Telecommunications Industry Association ("TIA") has little confidence in the WRC-97 limits.[8] It argues that the WRC-97 pfd limits could not be verified at recent ITU-R meetings and will be revisited at WRC-2000.[9]

In addition, Skybridge's reliance on the WRC-97 pfd limits is based on the assumption that fixed service stations generally have an elevation angle of only a few degrees.[10] This assumption does not hold true in many cases, particularly for sites in mountainous areas. For example, Pacific Bell has four sites in Northern California that have an antenna tilt of over 20 degrees, and six other sites with an antenna tilt over 10 degrees. In addition, in Northern and Southern California, there are nineteen sites with a tilt between 5-10 degrees. For the above sites, it is highly likely that there will be periodic mainbean-to-mainbeam interference between Gateway antennas on the SkyBridge satellites and the fixed-service receiver antennas. Thus, the optimistic assumptions of SkyBridge regarding interference scenarios are not justified.

Finally, even the Commission notes that Resolution 131 (WRC-97) recognizes "that further studies are required of the power flux-density limits applicable to non-GSO FSS

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[6] Id. at para. 20.

[7] Id.

[8] Id. at para. 19.

[9] Id.

[10] Id. at para. 18.

systems for the protection of terrestrial services in the bands 10.7-12.75 GHz[11]..." and the need for short term interference criteria is under active study by the ITU-R Study Group 9.[12]

SBC is concerned because the feasibility of sharing is based on a great deal of incomplete information. Before moving forward, it is critical to have a more compete picture of the interference issues.

In addition, conclusions about the feasibility of sharing and prior coordination procedures are valid only if the data on which they are based is valid. SBC is concerned that the Commission's assumptions that support the proposal to allow NGSO FSS services in the 10.7-11.7 GHz segment will prove invalid because the data behind them is incomplete. The end result may be that once the satellites are launched interference will occur. If that happens, it should be the responsibility of the NGSO licensee to resolve the issue entirely at its time and expense. The terrestrial fixed links support communications to rural areas and if that service is interrupted in any way, the customers lose their ability to place emergency calls. The incumbent FS licensees should not bear any burden for interference problems related to NGSO FSS operations.

One of the difficult aspects of interference from satellites is that it is transitory in nature. Therefore, it is difficult to identify and isolate the exact source of the interference. Once again the FS licensees should not be forced to absorb this financial burden. If it is determined that the interference comes from a satellite, the FS licensee should be reimbursed by the satellite provider for all costs associated with isolating and identifying the source of interference.

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[11] Id. at para. 20.

[12] Id.

The satellite provider should also be required to make information available to the FS licensee that will assist it determining the source of interference. For example, all information relating to operating parameters and with paths should be made available.

Finally, with respect to sharing SBC is unconvinced that the satellite services need all of the bandwidth proposed for reallocation. It is possible that a lesser allocation would be sufficient. SBC respectfully requests that the Commission carefully evaluate how much spectrum the satellite services truly need. A lesser allocation would obviously alleviate some of the pressure on FS licensees.

III. EXCLUSION ZONES SHOULD BE EXTENDED TO 200 KILOMETERS.

The Commission has proposed to establish exclusion zones in which NGSO FSS gateway earth stations could not be located.[13] The purpose of this is to ensure that during the relocation from 2 GHz, there is opportunity for relocation and growth within the 10.7-11.7 GHz band.[14] The Commission proposes to establish these exclusion zones around the 50 most populated cities, as defined by the 1990 census.[15] The exclusion zone would consist of a 100 kilometer radius around the city center.[16] SBC is concerned that a 100-kilometer radius is inadequate. For example, there are many areas outside of large cities in California in which microwave links need to be deployed because of desert or mountainous terrain which would fall out of this radius. Therefore, SBC recommends that the exclusion zones have a radius of 200 kilometers to ensure that microwave can relocate and grow in areas in which it is truly needed.

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[13] NPRM, para. 23.

[14] Id.

[15] Id. at para. 24.

[16] Id.

IV. CONCLUSION.

SBC is not opposed to sharing with the NGSO FSS services provided that interference criteria are more clearly understood and defined and that new licensees bear all responsibility for resolving any interference issues that may occur. In addition, there must be adequate opportunity in the 10.7-11.7 GHz band to support the growth of existing FS operations and the relocation and growth of FS relocated from the 2 GHz band. For this reason, SBC supports 50 exclusion zones, each with a radius of 200 kilometers. Finally, the Commission should carefully consider whether a lesser allocation for satellite service would better serve the public interest.

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